

## TRENDS IN YOUTH TOBACCO USE IN MASSACHUSETTS, 1993-2007

February 2008

Cigarette smoking causes an estimated 8,200 deaths, or about 1 of every 6 deaths, in Massachusetts each year<sup>i</sup>. Eighty-five percent of current adult smokers in Massachusetts had their first cigarette before age 18. Sixty-seven percent were smoking regularly before the age of 18<sup>ii</sup>. Research indicates that the earlier young people begin to smoke, the greater their permanent lung damage and the more likely they are to become addicted to cigarettes<sup>iii</sup>.

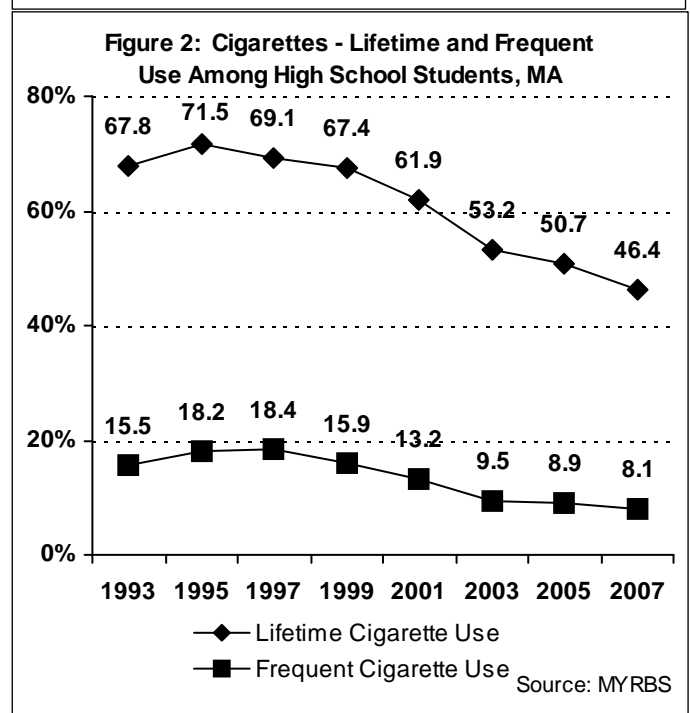
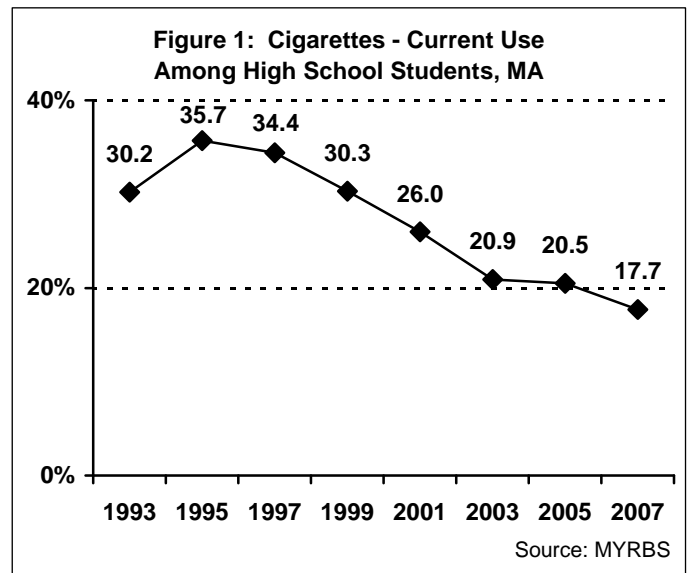
The data reported below are drawn from the Massachusetts Department of Education's 2007 Youth Risk Behavior Survey (MYRBS) and the Massachusetts Department of Public Health's 2007 Youth Health Survey (MYHS).

### YOUTH CIGARETTE SMOKING

#### High School Students

Lifetime, current and frequent cigarette smoking has declined significantly among high school students in Massachusetts.

- Current cigarette smoking (past 30 day use) among high school students was 17.7% in 2007 (figure 1).
- Since reaching 35.7% in 1995, current smoking has declined by 50%.
- The percentage of students who have tried smoking cigarettes (lifetime use) among high school students was 46.4% in 2007 (figure 2).
- Since 1995, lifetime use of cigarettes has decreased by about 35%.
- Frequent cigarette smoking (more than 20 of the last 30 days) among high school students was 8.1% in 2007 (figure 2).
- Since 1995, frequent smoking has decreased by more than 55%.



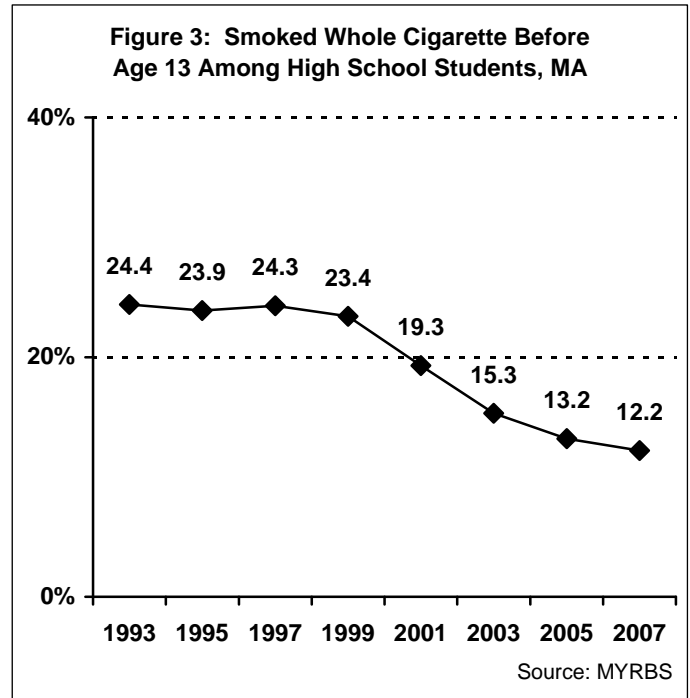
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- The percentage of high school students who smoked a whole cigarette before age 13 was 12.2% in 2007 (figure 3).
- Since 1999, the percentage has decreased by 48% (figure 3).
- Among high school students who smoke cigarettes, 41% report smoking on school property in the past month.

### Middle School Students

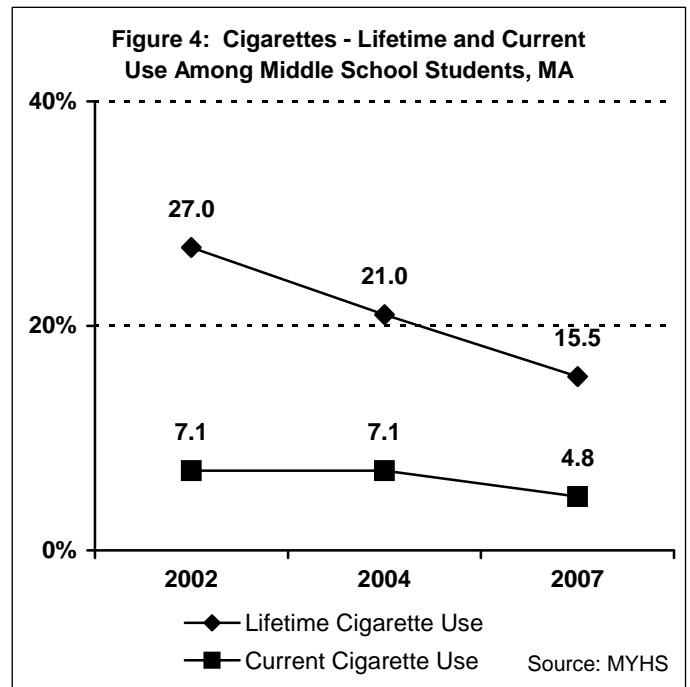
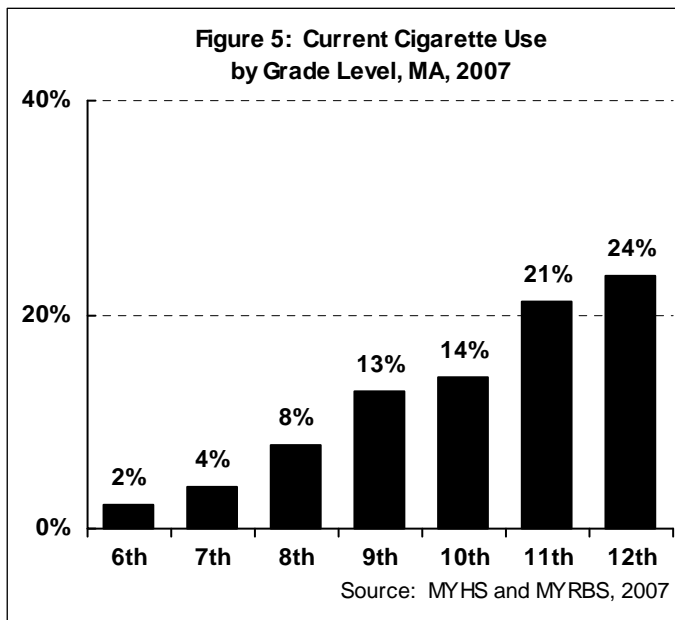
Among middle school students (6<sup>th</sup>, 7<sup>th</sup>, and 8<sup>th</sup> graders), lifetime and current cigarette smoking has decreased in Massachusetts.

- The percentage of middle school students who have tried cigarette smoking (lifetime use) was 15.5% in 2007 (figure 4).
- Current cigarette use (past 30 day use) among 6<sup>th</sup> to 8<sup>th</sup> grade students was 4.8% in 2007 (figure 4).



### Cigarette Use by Grade and Gender

- The percentage of current smokers increases as grade level increases. Among twelfth grade students, current cigarette use was 24% in 2007 (figure 5).
- Current cigarette smoking among female high school students is about the same rate as for males (Females – 17.9%; Males – 17.6%).



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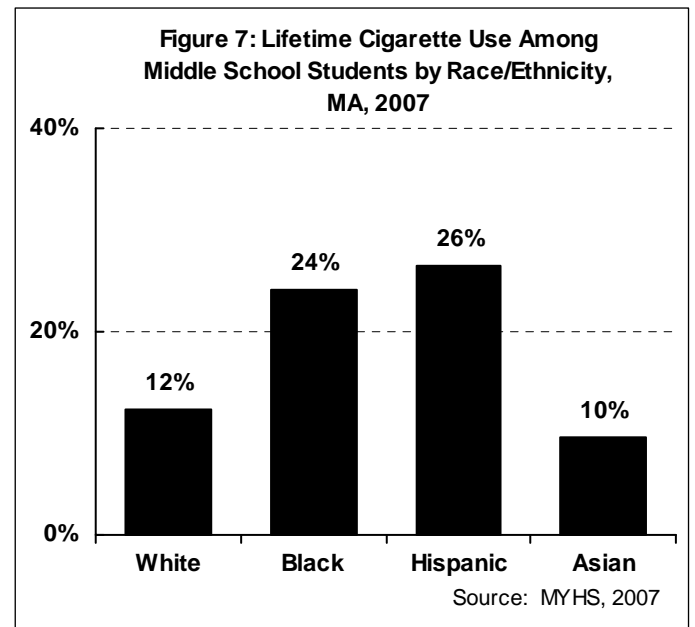
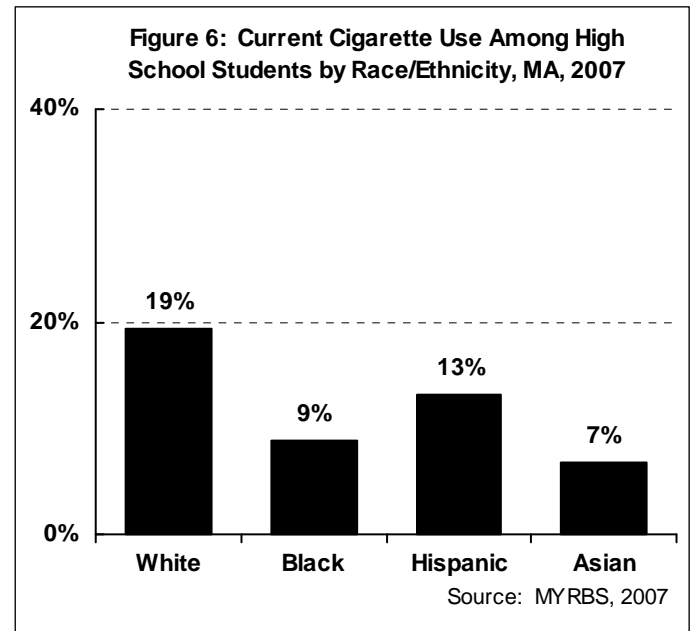
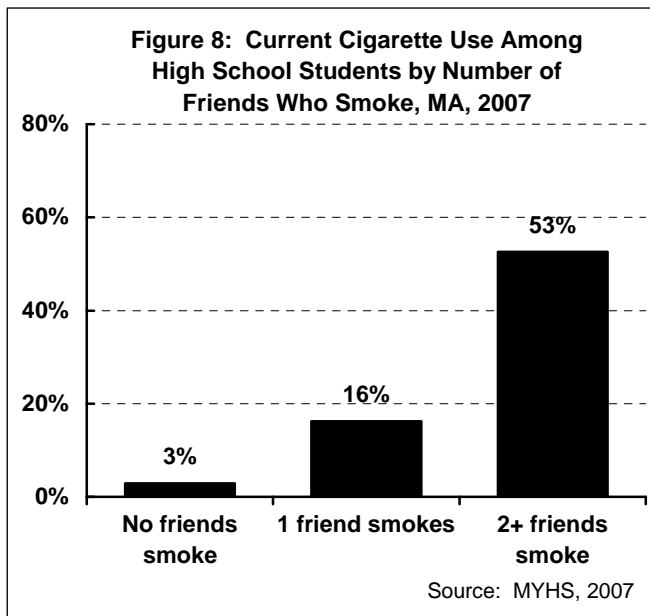
### Cigarette Use by Race/Ethnicity

- Nineteen percent of White high school students reported that they are current cigarette smokers compared to 13% of Hispanic students, 9% of Black students, and 7% of Asian students (figure 6) <sup>iv</sup>.
- Among middle school students, lifetime cigarette use among Black students (24%) and Hispanic students (26%) is about twice that of white, non-Hispanics (12%) (figure 7) <sup>v</sup>.

### Youth More Likely to Smoke Cigarettes

High school students who are more likely to be current cigarette smokers <sup>vi</sup> include students who:

- have two or more friends who smoke cigarettes (53%) (figure 8),

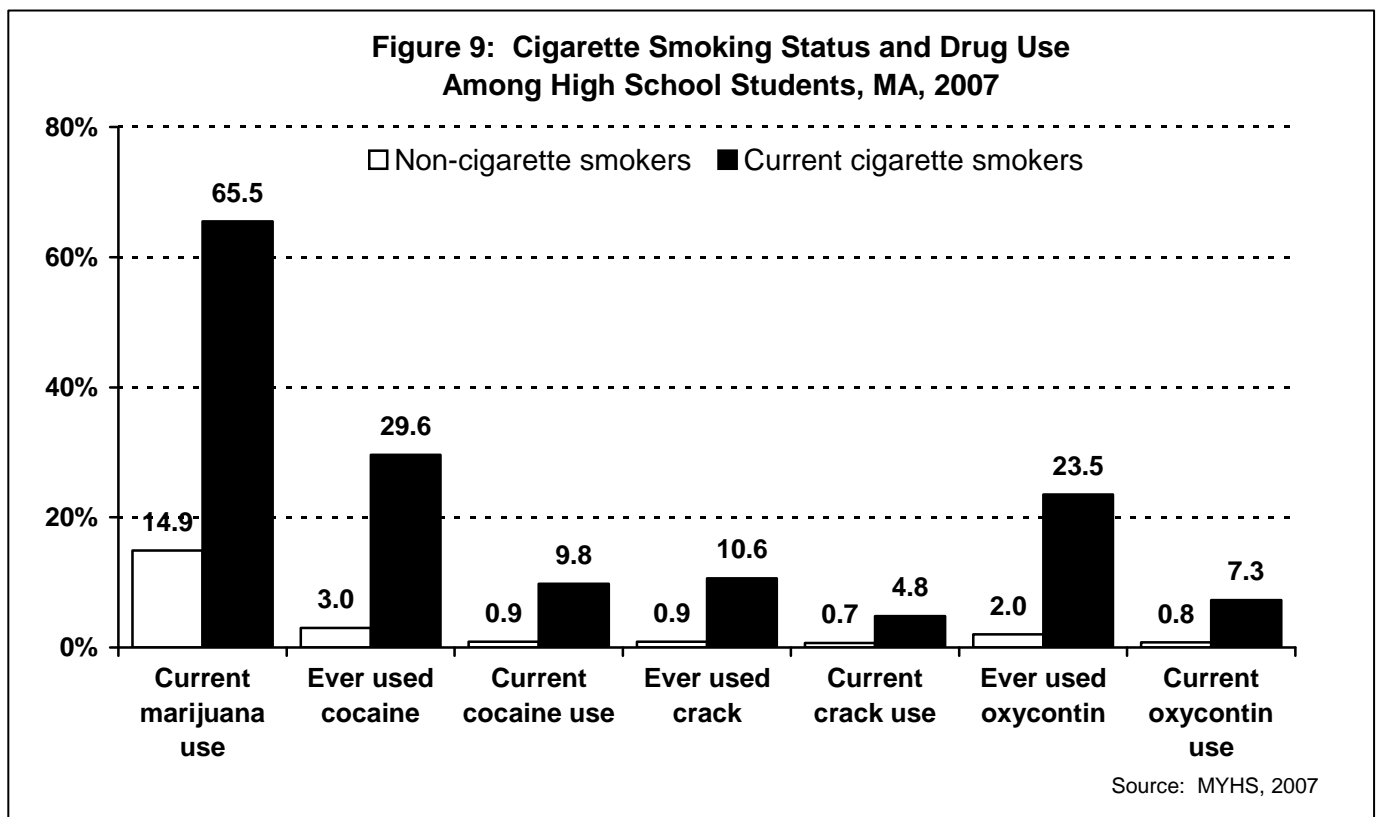


- felt sad or hopeless (30%), or attempted suicide (40%),
- live at home with a smoker (26%),
- received academic grades of mostly C's (26%), D's (45%) or F's (47%),
- perceive themselves as very overweight (31%),
- have a long-term emotional problem or learning disability (30%),
- self-identify as gay, lesbian, or bisexual (50%),
- are homeless (50%).

### MARIJUANA AND OTHER DRUG USE AMONG CIGARETTE SMOKERS

High school students who smoke are more likely to engage in other risky behaviors such as substance abuse. Compared to high school students who did not smoke cigarettes, current cigarette smokers were:

- more than 4 times more likely to report current marijuana use (figure 9),
- about 10 times more likely to report ever using cocaine,
- 11 times more likely to report current cocaine use,
- 10 times more likely to report ever using crack,
- about 7 times more likely to report current crack use,
- 11 times more likely to have ever tried oxycontin without a prescription, and
- 9 times more likely to report current oxycontin use.

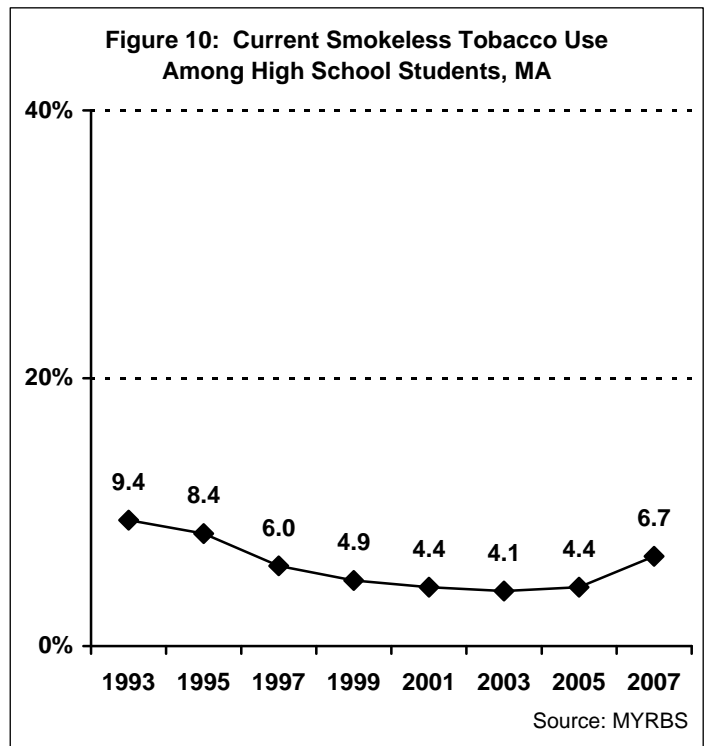


## OTHER YOUTH TOBACCO USE

### Smokeless Tobacco Use

Smokeless tobacco use (chewing tobacco, snuff, or dip, such as Redman, Levi Garrett, Beechnut, Skoal, Skoal Bandits, or Copenhagen) declined from 1993 to 2003. In 2007, smokeless tobacco use has again risen to 1997 levels.

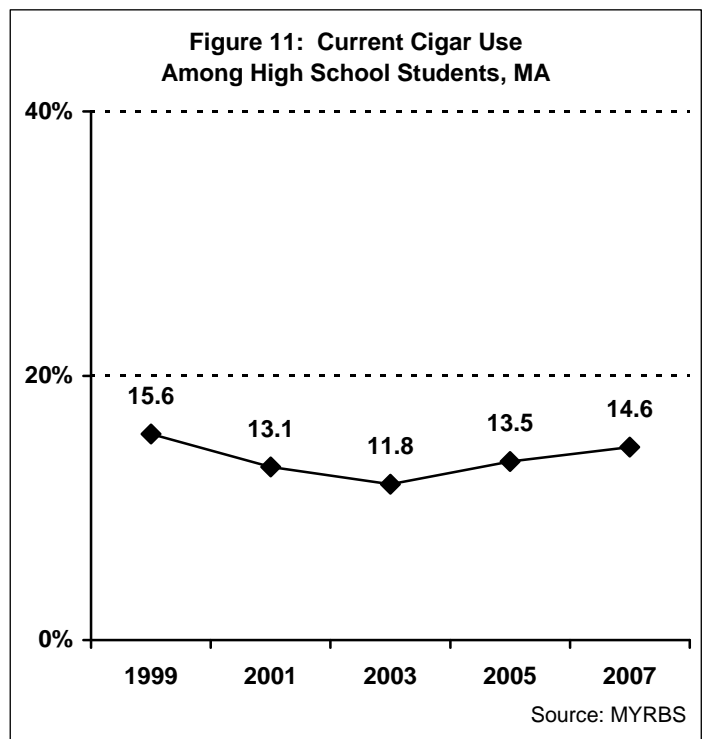
- Current use of smokeless tobacco among high school students was 6.7% in 2007 (figure 10).
- Among male high school students, current smokeless tobacco use was 11.2% in 2007.
- Lifetime use of smokeless tobacco among middle school students was 1.9% in 2007.



### Cigar Use

Among high school students, cigar use (cigars, cigarillos or little cigars) decreased from 1999 to 2003 and increased from 2003 to 2007.

- Current cigar use among high school students was 14.6% in 2007 (figure 11).
- Among male high school students, current cigar use was 21.0% in 2007.
- Lifetime use of cigars among middle school students was 8.7% in 2007.

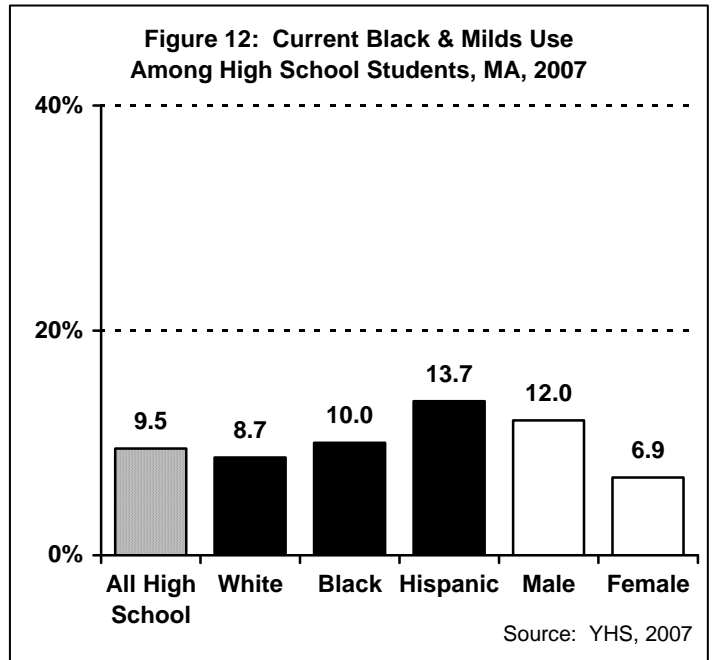


## Black & Mild Use

Anecdotal evidence indicated a growing popularity of “Black & Mild” brand cigars among youth, so questions about this product were included for the first time in the 2007 Youth Health Survey. Black & Milds are less expensive than typical cigars, sold in packs of 2 or 5 or as singles, and are not always considered a cigar.

About one-third of youth who reported Black & Mild use did not report cigar use. This is evidence that cigar use among youth is underreported when a survey question does not specifically refer to Black & Milds.

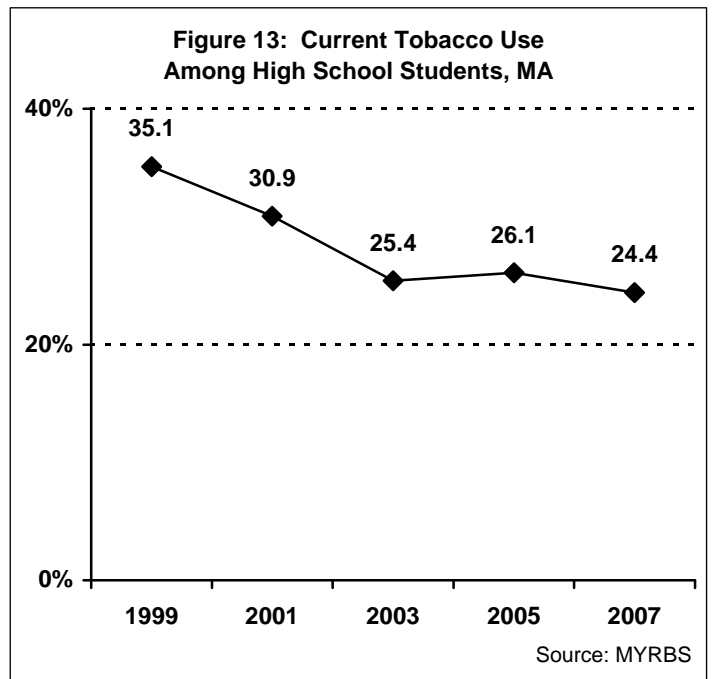
- Current use of Black & Milds (past 30 day use) was reported by 9.5% of high school students (figure 12).
- Twenty-four percent of high school students reported lifetime use (ever use) of Black & Milds. Six percent of middle school students reported lifetime use.
- The percentage of current Black & Milds use among high school students was 13.7% for Hispanics, 10.0% for black, non-Hispanics and 8.7% for white, non-Hispanics (figure 12).
- Male students (12.0%) were nearly twice as likely as females (6.9%) to report Black & Mild use within the past 30 days (figure 12)<sup>vii</sup>.



## Any Tobacco Use

Current use of tobacco<sup>viii</sup> (cigarettes, cigars, or smokeless tobacco) declined from 1999 to 2003 (figure 13). From 2003 to 2007, the use of tobacco did not change significantly.

Alternative tobacco products, such as Black & Milds, that do not fit neatly into a category may result in an under report of tobacco use. Despite these limitations, youth tobacco use trends offer important and useful information to help guide tobacco control policy in Massachusetts.



## BRIEF DESCRIPTION OF YOUTH SURVEY INSTRUMENTS

### Massachusetts Youth Risk Behavior Survey

The Massachusetts Youth Risk Behavior Survey (MYRBS) is a high school survey which has been conducted every two years since 1993 by the Massachusetts Department of Education with funding from the United States Centers for Disease Control and Prevention (CDC). The survey monitors adolescent risk behaviors related to the leading causes of morbidity and mortality among youth and adults. These behaviors include tobacco, alcohol, and other drug use; behaviors related to intentional and unintentional injuries; high-risk sexual behaviors; poor dietary patterns; and lack of physical activity.

Information on the YRBS survey instrument and methodology is available from the Massachusetts Department of Education.

### Massachusetts Youth Health Survey

The Massachusetts Youth Health Survey (YHS) is the Massachusetts Department of Public Health's (MDPH) surveillance project to assess the health of public school students in grades 6 through 12. It is conducted by the MDPH in collaboration with the Massachusetts Department of Education (MDOE). The survey contains health status questions in addition to questions about risk behaviors and protective factors. The survey project was initiated in 1984 as the Triennial School Survey (TSS), assessing alcohol, tobacco and other drug use in grades 7-12. Grade six was added in 1996. The TSS instrument was last used in 1999. The Youth Health Survey was administered in 2002, 2004, and 2007.

The YHS survey instrument and methodology is available from the Massachusetts Department of Public Health, Office of Data Analytics and Decision Support.

### ACKNOWLEDGEMENTS

This report was prepared by Mark Paskowsky, Thomas Land, and Lois Keithly of the Massachusetts Tobacco Control Program, Massachusetts Department of Public Health, in collaboration with Theresa Anderson and Paola Gilsanz, Office of Data Analytics and Decision Support, Massachusetts Department of Public Health, and Carol Goodenow and Chiniqua Milligan, Coordinated School Health Program, Massachusetts Department of Education. Special thanks to Anthony Roman, Center for Survey Research, University of Massachusetts at Boston, for his expertise on survey methodology and administration.

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## ENDNOTES

<sup>i</sup> Massachusetts Department of Public Health, Smoking-Attributable Mortality, Morbidity, and Economic Costs (SAMMEC), September 2007. Data based on Massachusetts Deaths in 2005.

<sup>ii</sup> Massachusetts Department of Public Health, 2002 Massachusetts Behavioral Risk Factor Surveillance System (BRFSS).

<sup>iii</sup> Public Health Service. (1994). *Preventing tobacco use among young people: A report of the Surgeon General*. (DHHS Publication No. 0455-B-02). Washington, DC: U.S. Government Printing Office.

<sup>iv</sup> The rate of current cigarette smoking among white, non-Hispanics is statistically significant from that of black, non-Hispanic and Asian, non-Hispanic students (based on 95% confidence intervals).

<sup>v</sup> The percentage of lifetime cigarette use among white, non-Hispanics is statistically significant from that of Black, non-Hispanic and Hispanic students (based on 95% confidence intervals).

<sup>vi</sup> For each of the current cigarette smoking estimates among subgroups, the rate is statistically significant at the 95% level.

<sup>vii</sup> The difference in Black & Mild use between male and female high school students is statistically significant.

<sup>viii</sup> Black & Milds use is not included in the current tobacco use estimate, because it would not be comparable across years.